CLAIMS

1. A method in an IP network, the network including a switch node (5), at least one DHCP server (4,4a,4b) and at least one subscriber (6) being associated with the node, the
5 method including the following steps:

- creating a list (L1) of trusted ones of the DHCP servers;

- transmitting by the subscriber (6) a DHCP request message (M3) for an IP address;

- receiving a reply message (M4), which carries an assigned
10 subscriber IP address (IP1);

- analysing (510,808,(8)) the reply message to be a DHCP message and having a source address (IP4) from one of the trusted DHCP servers (4);

- updating (513,812,(10)) a filter (9, TAB1) dynamically in
15 the node (5), the filter storing an identification (MAC1,P1,VLAN1) of the subscriber (6) and the assigned subscriber IP address (IP1);

- transmitting a frame (FR1) from the subscriber (6) using a source IP address (IPX);

20 - comparing in the filter (9,TAB1) said source IP address with the stored subscriber IP address (IP1);

- discarding said frame when said source IP address (IPX) differs from the stored subscriber IP address (IP1).

2. A method in an IP network according to claim 1, the
25 method including storing in the filter (9,TAB1) a subscriber MAC address (MAC1), a subscriber physical port number (P1), a subscriber virtual LAN identity (VLAN1) and a lease time interval (T1) for the assigned subscriber IP address (IP1).

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3. A method in an IP network according to claim 1, the subscriber IP address being statically assigned and handled by the DHCP servers (4,4a,4b).

5   4. A method in an IP network according to claim 2, the method including deleting the subscriber identification (MAC1,P1,VLAN1) and the corresponding assigned subscriber IP address (IP1) from the filter (9,TAB1) when the lease time interval (T1) is out.

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5. A method in an IP network according to claim 1, 2, 3 or 4, the method including:

- counting a number of attempts (n) from the subscriber (6A) to use an illegitimate IP address;

15   - comparing (9,C1) the number (n) of the attempts with a threshold number (N);

- sending a warning signal (W1) when the number of attempts (n=11) exceeds a threshold (N=10) criteria.

20   6. A device in an IP network, the device (5) including:

- at least one port (P1,P2,P3) for a subscriber (6,6A);

- an uplink port (PN) for DHCP servers in the network (1); and

- a filter device (9) having a list (L1) over trusted ones
25   of the DHCP servers (4,4a,4b), the filter device (9) being associated with the ports (P1,P2,P3; PN),

wherein

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- the device (5) is arranged to receive a subscriber IP address request message (M3) on the subscriber port (P1), analyse it to be a DHCP message and transmit it on the uplink port (PN);

5 - the device (5) is arranged to receive a reply message (M4) on the uplink port (PN), analyse it to be a DHCP message and to have a source IP address (IP4) from one of the trusted DHCP servers on the list (L1);

- the device (5) is arranged to dynamically update the
10   filter (9,TAB1) with an identification of the subscriber (6) and a corresponding assigned subscriber IP address (IP1) in the reply message (M4);

- the device is arranged to receive a frame (FR1) with a source IP address (IPX) on the subscriber port (P2);

15 - the device is arranged to compare in the filter (9,TAB1) said source IP address (IPX) with the stored subscriber IP address (IP1); and

- the device is arranged to discard said frame (FR1) when said source IP address (IPX) differs from the stored
20   subscriber IP address (IP1).

7. A device in an IP network according to claim 6, the device being arranged to store in the filter (9,TAB1) a subscriber MAC address (MAC1), a subscriber physical port
25 number (P1), a subscriber virtual LAN identity (VLAN1) and a lease time interval (T1) for the assigned subscriber IP address (IP1).

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8. A device in an IP network according to claim 6, the subscriber IP address being a statically assigned address which is handled by the DHCP servers (4,4a,4b).

5   9. A device in an IP network according to claim 7, the device (5) being arranged to delete the subscriber identification (MAC1,P1,VLAN1) and the corresponding assigned subscriber IP address (IP1) from the filter (9,TAB1) when the lease time interval (T1) is out.

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10. A device in an IP network according to claim 6, 7, 8 or 9, the filter (9) having a counter (C1) being arranged to count a number (n) of discarded frames (FR1) on the subscriber port (P2), to compare (9,C1) the number (n) of

15   the discarded frames with a threshold number (N) and to send a warning signal (W1) when the number of discarded frames (n=11) exceeds a threshold criterion (N=10).

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